

# Work Order ID 122740

Tuesday, July 22, 2014 8:45:09 AM

**\*122740\***

Page 1

Item ID: D412-702-315

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Harness Assembly

Start Date: 7/16/14 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 7/21/14 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: MLS Date: 14-07-23

Tooling:

Date:

Run Start

**\*NR1\***

QC: Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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DSI 9511	A
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100

0.00

**\*100\***

Small Fab

Memo

0.00

Small Fab

Assemble as per dwg ICA D412-702 p.49

110

QC5- Inspect part completeness to step on W/O

0.00

**\*110\***

QC

Memo

0.00

Quality Control

120

0.00

**\*120\***

Packaging

Memo

0.00

Packaging

Identify with P/N & CHG# and pack for shipping as per PPP D412-702-315

CHG001

Location: 5T468

PPP Rev: \_\_\_\_\_

IX 14/07/28 DAS 36 9-89

① DAS 27 9-89

IX DAS 28 9-89 JUL 28 2014

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>             Crosstube <input type="checkbox"/>              Small Fab <input type="checkbox"/>              Finishing <input type="checkbox"/>              Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/>              Prod. Eng. Coord. <input type="checkbox"/>              Rec/Store/Packaging <input type="checkbox"/>              Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/>              Quality <input type="checkbox"/>              Other <input type="checkbox"/> </div> </div>
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence
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☐ Outside Dimensions  
☐ Over/Under tolerance  
☐ Part Incorrect  
☐ Part Lost/Missing  
☐ Part Moved  
☐ Positioned Wrong  
☐ Power Loss/Surge

☐ Pressure/Forced  
☐ Set-up  
☐ Temperature/Cure  
☐ Weld  
☐ Wrong Stock Pulled  
☐ Other

**Work Order ID 122740**

Tuesday, July 22, 2014 8:45:09 AM

**\*122740\***

Page 2

Item ID: D412-702-315

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Harness Assembly

Start Date: 7/16/14

Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 7/21/14

Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

QC21- Final Inspection - Work Order Release

0.00

**\*130\***

QC

Memo

0.00

Quality Control

14/7/28

14-7-28

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>             Crosstube <input type="checkbox"/>              Small Fab <input type="checkbox"/>              Finishing <input type="checkbox"/>              Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/>              Prod. Eng. Coord. <input type="checkbox"/>              Rec/Store/Packaging <input type="checkbox"/>              Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/>              Quality <input type="checkbox"/>              Other <input type="checkbox"/> </div> </div>
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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# Picklist Print

Tuesday, July 22, 2014 8:45:08 AM

Page 1

Work Order ID: 122740

**\*122740\***

Parent Item: D412-702-315

**\*D412-702-315\***

Parent Item Name: Harness Assembly

Start Date: 7/16/14

Required Date: 7/21/14

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A new issue DD 10.04.30 verified:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3573-5 <b>*D3573-5*</b> Adapter		Manufactured	No			100	Each	6.0000	1	1		14/07/28	DAS 36 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				6					
				31863				6					
D4088-041 <b>*D4088-041*</b> Shoulder Harness		Manufactured	No			100	Each	14.0000	1	1		14/07/28	DAS 36 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				st268				8					
				107228				1					
				113656				3					
				115416				4					
				ST465				6					
				119428				2					
				121008				4					
MS24693-S272 <b>*MS24693-S272*</b> SCREW		Purchased	No			100	Each	301.0000	4	4		14/07/28	DAS 36 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				CA				48					
				M129682				48					
				ST295				210					
				M126190				210					
				ST395				43					
				M126119				43					

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other
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# Picklist Print

Tuesday, July 22, 2014 8:45:08 AM

Page 2

Work Order ID: 122740

**\*122740\***

Parent Item: D412-702-315

**\*D412-702-315\***

Parent Item Name: Harness Assembly

Start Date: 7/16/14

Required Date: 7/21/14

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0316J

Purchased

No

100

Each

1,070.000

4

4

**\*NAS1149D0316.J\***

Washer

\*\*

DAS  
36  
9-89

AN9603D10LL

Location

Loc Qty

Loc Code

CA

82

M129682

82

ST277

988

M127956

400

M127993

588

MS21042L3

Purchased

No

100

Each

4,892.000

4

4

**\*MS21042L3\***

Nut

\*\*

DAS  
36  
9-89

Location

Loc Qty

Loc Code

ST307

4892

123900

955

M126333

34

M127410

13

M127831

41

M128401

42

M128754

3807

4

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

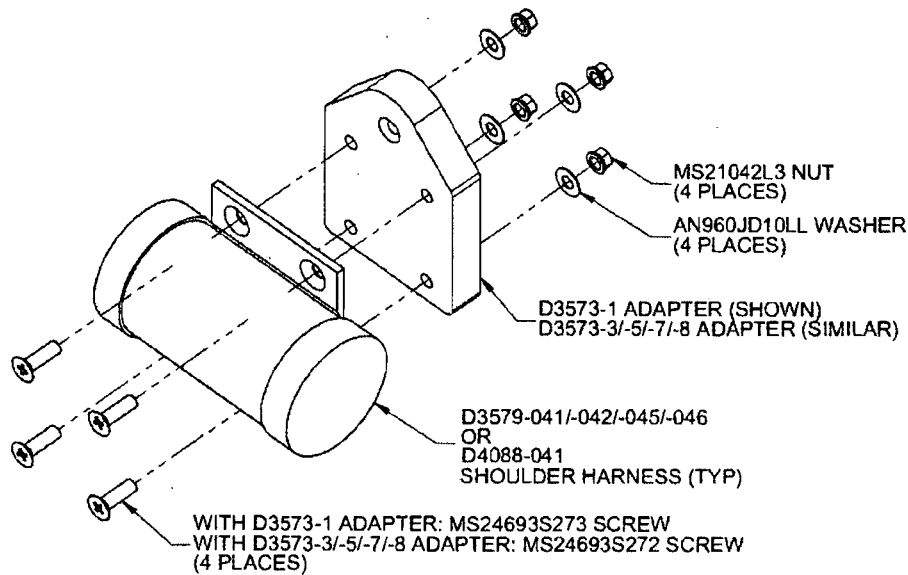
Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>             Crosstube <input type="checkbox"/>              Small Fab <input type="checkbox"/>              Finishing <input type="checkbox"/>              Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/>              Prod. Eng. Coord. <input type="checkbox"/>              Rec/Store/Packaging <input type="checkbox"/>              Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/>              Quality <input type="checkbox"/>              Other <input type="checkbox"/> </div> </div>
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

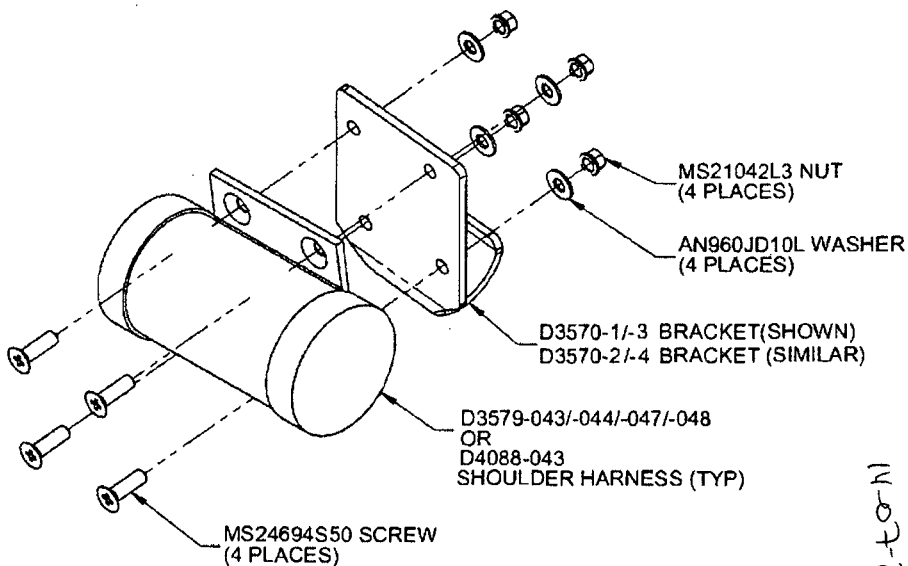
### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other
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**DETAIL 'K' D412-702-101A/-103A/-105A/-107A/-109A/-115A/-117A AND  
D412-702-101B/-103B/-105B/-107B/-109B/-115B/-117B OR -301/-303/-305/-  
307/-309/-315/-317 HARNESS ASSEMBLIES**



**DETAIL 'L' D412-702-111A/-111B/-113A/-113B OR -311/-313/-321/-323 HARNESS ASSEMBLIES**

SHOP COPY  
RETURN TO  
ENGINEERING  
CONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
122940 MJS  
14-07-23

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**25-00-00**

# DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D412-702 REV. E AND  
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D412-702 REV. 3

REF TCCA STC SH04-7  
REF FAA STC SR01997NY  
REF EASA STC EASA.I.M.R.S.00710

This service instruction adds several kits equipped with improved inertia reels:

The Dart **D412-702-341** 13-Man Shoulder Harness Kit provides 3-point harnesses with inertia reels and joined lap and shoulder belts for all 13 passenger seating positions in the aircraft cabin. The kit also contains hardpoints for securing the harnesses. The harnesses for this kit meet the requirements of TSO-C114 and replace the existing lap belts. This kit should be installed similar to the D412-702-041B kit, as detailed in Table 1 of this service instruction.

The Dart **D412-702-343** 5-Man Forward Facing Shoulder Harness Kit provides 3-point harnesses with inertia reels and joined lap and shoulder belts for the 5 forward facing seating positions in the aircraft cabin. The kit also contains hardpoints for securing the harnesses. The harnesses for this kit meet the requirements of TSO-C114 and replace the existing lap belts. This kit should be installed similar to the D412-702-043B kit, as detailed in Table 1 of this service instruction.

The Dart **D412-702-345** 4-Man Shoulder Harness Kit provides 3-point harnesses with inertia reels and joined lap and shoulder belts for the 4 aft facing seating positions in the aircraft cabin. The kit also contains hardpoints for securing the harnesses. The harnesses for this kit meet the requirements of TSO-C114 and replace the existing lap belts. This kit should be installed similar to the D412-702-045B kit, as detailed in Table 1 of this service instruction.

The Dart **D412-702-347** 4-Man Shoulder Harness Kit provides 3-point harnesses with inertia reels and joined lap and shoulder belts for the 4 side facing seating positions in the aircraft cabin. The kit also contains hardpoints for securing the harnesses. The harnesses for this kit meet the requirements of TSO-C114 and replace the existing lap belts. This kit should be installed similar to the D412-702-047B kit, as detailed in Table 1 of this service instruction.

The Dart **D412-702-349** 1-Man Shoulder Harness Kit provides a 3-point harness with an inertia reel and joined lap and shoulder belts for the center forward facing seating position in the aircraft cabin. The kit also contains hardpoints for securing the harness. The harness for this kit meets the requirements of TSO-C114 and replaces the existing lap belts. This kit should be installed similar to the D412-702-049B kit, as detailed in Table 1 of this service instruction.

The Dart **D412-702-351** 1-man 3-point shoulder harness kits are available for the outboard seats of the 5-man forward facing bench in Bell 205/212/214/412 model aircraft. The kit can be installed LH or RH. These kits should be installed similar to the D412-702-051B/-052B kits, as detailed in Table 1 of this service instruction.

The Dart **D214-702-337** 5-Man Aft Facing Shoulder Harness Kit provides 3-point harnesses with inertial reels and joined lap and shoulder belts for the 5-man aft facing seat installed in the Bell 214B/B1 model aircraft. This kit should be installed similar to the D214-702-037B kit, as detailed in Table 1 of this service instruction.

The Dart **D205-702-353** 4-Man Aft Facing Shoulder Harness Kit provides 3-point harnesses with inertial reels and joined lap and shoulder harnesses for the 4-man aft facing seat installed in the UH-1 model aircraft. This kit should be installed similar to the D205-702-053B kit, as detailed in Table 1 of this service instruction.

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01






APPROVED

BY:   
D. SHEPHERD (DE # 02)

DATE: 10.03.22

CERT. NO.: SH04-7

ISSUE NO.: 3

A	NEW ISSUE	CP	10.03.18
REV.	DESCRIPTION	BY	DATE
DESIGN		<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9511	SHEET 1 OF 6
APPROVED		TITLE	SCALE
DE APPR.		NEW SHOULDER HARNESS KITS	NTS
DATE	10.03.18	COPYRIGHT © 2010 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

# **INSTALLATION**

The Dart D412-702-3XX kits should be installed similar to the kits in Installation Instructions IIN-D412-702 Rev. E or Dart Service Instruction (DSI) listed below:

**TABLE 1**

Part Number	Description	Install similar to:
D412-702-341	Shoulder Harness Kit	D412-702-041B (IIN-D412-702, DSI 9408)
D412-702-343	Shoulder Harness Kit	D412-702-043B (IIN-D412-702, DSI 9453 [214], DSI 9408)
D412-702-345	Shoulder Harness Kit	D412-702-045B (IIN-D412-702, DSI 9469)
D412-702-347	Shoulder Harness Kit	D412-702-047B (IIN-D412-702, DSI 9408)
D412-702-349	Shoulder Harness Kit	D412-702-049B (IIN-D412-702, DSI 9408)
D412-702-351	Shoulder Harness Kit	D412-702-051B (LH) (DSI 9397, DSI 9408) D412-702-052B (RH) (DSI 9397, DSI 9408)
D214-702-337	Shoulder Harness Kit	D214-702-037B (DSI 9454)
D205-702-353	Shoulder Harness Kit	D205-702-053B (DSI 9460)
D412-702-301	Harness Assembly	D412-702-101B (IIN-D412-702)
D412-702-303	Harness Assembly	D412-702-103B (IIN-D412-702)
D412-702-305	Harness Assembly	D412-702-105B (IIN-D412-702)
D412-702-307	Harness Assembly	D412-702-107B (IIN-D412-702)
D412-702-309	Harness Assembly	D412-702-109B (IIN-D412-702)
D412-702-311	Harness Assembly	D412-702-111B (IIN-D412-702)
D412-702-313	Harness Assembly	D412-702-113B (IIN-D412-702)
D412-702-315	Harness Assembly	D412-702-115B (IIN-D412-702)
D412-702-317	Harness Assembly	D412-702-117B (IIN-D412-702)
D412-702-319	Harness Assembly	D412-702-119B (DSI 9454)
D412-702-321	Harness Assembly	D412-702-121B (DSI 9454, DSI 9469)
D412-702-323	Harness Assembly	D412-702-123B (DSI 9454, DSI 9469)

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

**APPROVED**

BY:   
D. SHEPHERD (DE # 02)

DATE: 10.03.22  
CERT. NO.: SH04-7  
ISSUE NO.: 3

DESIGN	99	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA
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MFG. APPR.	N/A	DSI 9511 SHEET 2 OF 6
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DE APPR.	14	NEW SHOULDER HARNESS KITS NTS
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**PARTS LIST**
**TABLE 2**

QTY -341	QTY -343	QTY -345	QTY -347	QTY -349	QTY -351	Part Number	Description
X						D412-702-341	Dart 13-Man 3-Point Shoulder Harness Kit
	X					D412-702-343	Dart 5-Man 3-Point Forward Facing Shoulder Harness Kit
		X				D412-702-345	Dart 4-Man 3-Point Aft Facing Shoulder Harness Kit
			X			D412-702-347	Dart 4-Man 3-Point Side Facing Shoulder Harness Kit
				X		D412-702-349	Dart 1-Man 3-Point Forward Shoulder Harness Kit
					X	D412-702-351	Dart 1-Man 3-Point Shoulder Harness Kit
1	1		1	1		D412-702-059	GROMMET KIT
9	5		4	1	1	D3761-1-041	HOOK AND LOOP STRIP (DSI 9408)
2	1		1			D412-702-301	HARNESS ASSEMBLY (NEW)
1*	1*		1*			D3573-7	ADAPTER
1*	1*		1*			D4088-041	SHOULDER HARNESS (NEW)
4*	4*		4*			MS24693S272	SCREW
4*	4*		4*			AN960JD10LL	WASHER
4*	4*		4*			MS21042L3	NUT
2	1		1			D412-702-303	HARNESS ASSEMBLY (NEW)
1*	1*		1*			D3573-8	ADAPTER
1*	1*		1*			D4088-041	SHOULDER HARNESS (NEW)
4*	4*		4*			MS24693S272	SCREW
4*	4*		4*			AN960JD10LL	WASHER
4*	4*		4*			MS21042L3	NUT
1	1			1		D412-702-305	HARNESS ASSEMBLY (NEW)
1*	1*			1*		D3573-1	ADAPTER
1*	1*			1*		D4088-041	SHOULDER HARNESS (NEW)
4*	4*			4*		MS24693S273	SCREW
4*	4*			4*		AN960JD10LL	WASHER
4*	4*			4*		MS21042L3	NUT
1	1				1	D412-702-307	HARNESS ASSEMBLY (NEW)
1*	1*				1*	D3573-3	ADAPTER
1*	1*				1*	D4088-041	SHOULDER HARNESS (NEW)
4*	4*				4*	MS24693S272	SCREW
4*	4*				4*	AN960JD10LL	WASHER
4*	4*				4*	MS21042L3	NUT
1	1					D412-702-309	HARNESS ASSEMBLY (NEW)
1*	1*					D3573-3	ADAPTER
1*	1*					D4088-041	SHOULDER HARNESS (NEW)
4*	4*					MS24693S272	SCREW
4*	4*					AN960JD10LL	WASHER
4*	4*					MS21042L3	NUT

\* denotes that part is included in assembly above

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QTY -341	QTY -343	QTY -345	QTY -347	QTY -349	QTY -351	Part Number	Description
1		1				D412-702-311	HARNESS ASSEMBLY (NEW)
1*		1*				D3570-1	BRACKET
1*		1*				D4088-043	SHOULDER HARNESS (NEW)
4*		4*				MS24694S50	SCREW
4*		4*				AN960JD10L	WASHER
4*		4*				MS21042L3	NUT
1		1				D412-702-313	HARNESS ASSEMBLY (NEW)
1*		1*				D3570-2	BRACKET
1*		1*				D4088-043	SHOULDER HARNESS (NEW)
4*		4*				MS24694S50	SCREW
4*		4*				AN960JD10L	WASHER
4*		4*				MS21042L3	NUT
1			1			D412-702-315	HARNESS ASSEMBLY (NEW)
1*			1*			D3573-5	ADAPTER
1*			1*			D4088-041	SHOULDER HARNESS (NEW)
4*			4*			MS24693S272	SCREW
4*			4*			AN960JD10LL	WASHER
4*			4*			MS21042L3	NUT
1			1			D412-702-317	HARNESS ASSEMBLY (NEW)
1*			1*			D3573-5	ADAPTER
1*			1*			D4088-041	SHOULDER HARNESS (NEW)
4*			4*			MS24693S272	SCREW
4*			4*			AN960JD10LL	WASHER
4*			4*			MS21042L3	NUT
1		1				D412-702-321	HARNESS ASSEMBLY (NEW)
1*		1*				D3570-3	BRACKET
1*		1*				D4088-043	SHOULDER HARNESS (NEW)
4*		4*				MS24694S50	BOLT
4*		4*				AN960JD10L	WASHER
4*		4*				MS21042L3	NUT
1		1				D412-702-323	HARNESS ASSEMBLY (NEW)
1*		1*				D3570-4	BRACKET
1*		1*				D4088-043	SHOULDER HARNESS (NEW)
4*		4*				MS24694S50	BOLT
4*		4*				AN960JD10L	WASHER
4*		4*				MS21042L3	NUT

\* denotes that part is included in assembly above

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



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...continued from previous page

QTY -341	QTY -343	QTY -345	QTY -347	QTY -349	QTY -351	Part Number	Description
2	2					D3542-1	BRACKET
7	3		4	1		D3571-1	GUIDE
2	2					D3571-3	GUIDE
2		2				D3572-041	GUIDE ASSEMBLY
12	6		6	2		D3578-041	DOUBLER
2	2					D3610-041	BRACKET
2	2					D3618-1	CAP
4	4					AN4-10A	BOLT
2		2				AN4-16A	BOLT
4		4				AN4-25A	BOLT
4		4				AN4-27A	BOLT (DSI 9469)
2	2					AN4-44A	BOLT
2	2					MS24693S274	SCREW
3	3			1		MS24694S56	SCREW
10	2		8			MS24694S58	SCREW
1	1			1		MS24694S60	SCREW
26	6	20				AN960JD416	WASHER
4	4					AN960JD416L	WASHER
12	6	6				MS21042L4	NUT
24	12		12	4		CR3212-4-4	RIVET

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




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TABLE 3

QTY -337	QTY -353	Part Number	Description
X		D214-702-337	Dart 5-Man 3 Point Aft Facing Shoulder Harness Kit, for 214 Aircraft
	X	D205-702-353	Dart 4-Man 3 Point Aft Facing Shoulder Harness Kit, for UH-1 Aircraft
1	2	D412-702-311	HARNESS ASSEMBLY (NEW) --> SEE TABLE 2
1	2	D412-702-313	HARNESS ASSEMBLY (NEW) --> SEE TABLE 2
1		D412-702-321	HARNESS ASSEMBLY (NEW) --> SEE TABLE 2
1		D412-702-323	HARNESS ASSEMBLY (NEW) --> SEE TABLE 2
1		D412-702-319	HARNESS ASSEMBLY (NEW)
1*		D3925-041	BRACKET
1*		D4088-043	SHOULDER HARNESS ASSEMBLY (NEW)
4*		MS24694S50	BOLT
4*		AN960JD10L	WASHER
4*		MS21042L3	NUT
	1	D3572-043	GUIDE ASSY
	1	D3572-044	GUIDE ASSY
1		D3920-041	SEATBELT GUIDE ASSEMBLY
2		D3920-5	SEATBELT GUIDE
1	6	AN4-16A	BOLT
1		AN4-21A	BOLT
7		AN4-25A	BOLT
18	12	AN960JD416	WASHER
9	6	MS21042L4	NUT

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




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